

Passing to the Vegetable Parasites, the author does not seem to be so much at home as with the Animal. They are divided in rather a curious way, viz.: (1) the Dermatophytes, or cutaneous parasites, (2) the Perisporiaceæ or "Moulds," and (3) the Saccharomycetes. An *Aspergillus* is described as "formed of thin colourless filaments forming a matted layer or thallus, and a looser mass above, the so-called aerial mycelium." By the inoculation of the spores of *A. fumigatus* it is stated that "tuberculosis of the liver and lungs takes place." Although the next sentence renders the author's meaning clear, it is to be regretted that the term "tuberculosis," which is now applied only to a specific disease, should be used in an anatomical sense. The bacterial diseases are not described, as the author considers that they should be separately dealt with. Two appendices (one a complete list of the parasites attacking *Gallus domesticus*, the other a bibliography) and a good index complete the volume, which is illustrated with many capital woodcuts.

In spite of the blemishes mentioned above, the work supplies a distinct want and will prove a useful guide to the recognition and treatment of the parasitic diseases of poultry.

PROCEEDINGS OF LEARNED SOCIETIES.

GEOLOGICAL SOCIETY.

December 2, 1896.—Dr. Henry Hicks, F.R.S.,
President, in the Chair.

The following communications were read:—

1. 'On the Affinities of the Echinothuridæ, and on *Pedinothuria* and *Elikodiadema*, two new Subgenera of Echinoidea.' By J. W. Gregory, D.Sc., F.G.S.

The Author summarizes and discusses the literature bearing upon the Echinothuridæ, and brings forward arguments to prove that the family is a member of the order Diademoidea, and is derived from the Pedinidæ, members of which are found in earlier rocks than the Corallian, which contains the oldest member of the Echinothuridæ, namely, *Pelanchinus*. He maintains that the extreme flexibility and loose articulation of the plates of the living genera *Asthenosoma* and *Phormosoma* is due to the diminished calcification of the plates, and that these recent genera are extremely specialized forms, and not primitive,—the apparently primitive features of the family being secondarily acquired, not primæval.

A description is given of forms belonging to two new genera, described as *Pedinothuria*—a connecting-link between the Pedinidæ and Echinothuridæ; and *Elikodiadema*—which has a flexible test, is

a modified form of *Pseudodiadema*, and has probably arisen from the adoption of a deep-sea life resulting in diminished calcification of the test.

2. 'On *Echinocystis* and *Palæodiscus*, two Silurian Genera of Echinoidea.' By J. W. Gregory, D.Sc., F.G.S.

The Author gives a history of the genera *Echinocystis*, Salter, and *Palæodiscus*, Wyv. Thoms., redescibes their structures, and discusses their affinities. He concludes that *Echinocystis* is an echinid and not a cystid; and that *Palæodiscus* is an echinid and not an asterid. In order to prevent confusion, he suggests the name *Scolocystis* for a true cystid which was described by Hall as *Echinocystis*, some years after the latter name had been applied by Wyville Thomson to the fossil now concluded to be an echinid; and also suggests the name of *Discocystis* for the form named *Echinodiscus* by Worthen and Müller.

In discussing the affinities of *Echinocystis*, Wyv. Thoms., the two latest diagnoses of the Cystoidea (those of Prof. von Zittel and Prof. Haeckel) are considered, and it is contended that they do not enable us to draw any sharp line of distinction between cystids and echinids.

It is shown that the masticatory apparatus of *Palæodiscus* and *Echinocystis* explain the origin of that structure in gnathostomate echinids; and furthermore, it is suggested that *Echinocystis* renders probable the homology of the so-called 'calycinal plates' of the Echinoidea with the plates of the valvular pyramid of the Cystoidea, and not with the calyx-plates.

The Author gives synopses of the order Cystoicidaroidea of Prof. von Zittel, and of its two families, Palæodiscidæ and Echinocystidæ.

MISCELLANEOUS.

To the Editors of the 'Annals and Magazine of Natural History.'

The Generic Name of the River Crayfish.

GENTLEMEN,—It is unnecessary for me to reply to the Rev. Mr. Stebbing at any length.

(i.) Reference to vol. xi. of the Trans. Linn. Soc. will confirm the accuracy of my remark as to Leach's treatment of *Astacus* and *Nephrops*. I am surprised at Mr. Stebbing supposing that I cited an anonymous article of uncertain date.

(ii.) Mr. Stebbing appears to be unaware of rule 2 of the rules proposed by the British Association for zoological nomenclature. What is there said of Brisson applies literally to Gronovius, and the genera of the one author are as good as those of the other.

(iii.) Does not Mr. Stebbing know that 1758 has been well called by the most eminent of the exponents of the zoological works of